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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/803,567	03/18/2004	John E. Markaran	2003 P 04235 US 01	5950

7590 04/12/2005  
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EXAMINER

RO, BENTSU

ART UNIT	PAPER NUMBER
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2837

DATE MAILED: 04/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/803,567

Applicant(s)

MARKARAN, JOHN E.

Examiner

Bentsu Ro

Art Unit

2837

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7, 8, 10-12 and 14-17 is/are rejected.
- 7) ☒ Claim(s) 5, 6, 9, 13, 18 and 19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3/18 & 9/27/04 (2 sheets).
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## FIRST OFFICE ACTION

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 4, 7, 10, 11, 14, 15, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fassel et al US Patent No. 4,514,670.

The following chart compares the claimed subject matter with Fassel et al teaching.

<u>The claims:</u>	<u>Fassel et al teaching:</u>
1. A method of detecting rotation of an armature of a brush-type DC motor	Fassel et al Fig. 1 teaches a method and an apparatus for detecting rotation of an armature of a brush type dc motor 12; column 4, lines 50-53 states that <i>"The frequency of this undulation is proportional to the speed of the motor 12; the cycling time or period of the undulation is reversely proportional to the speed of the motor 12"</i> ;
having positive and negative power leads,	thus, Fassel's Fig. 1 circuit detects the rotation of the motor armature;
the method includes:	Fig. 1 shows a 12 volts positive power lead 11 and a ground lead Ch;
providing an RFI choke as a transformer in series with at least one of the power leads of the motor	Fig. 3 shows a transformer 18' connected in series with the ground lead Ch; column 8, line 57 identifies 18' as a transformer;

<p>to amplify current, and</p> <p>detecting rotation of the armature based on monitoring a voltage relating to the amplified current.</p>	<p>with respect to the transformer 18', Fassel does not identify it as a RFI choke, however, all inductors are RFI choke including the transformer 18', see further explanation at the end of this comparison chart;</p> <p>as shown in Fig. 3, the secondary winding of transformer 18' has more turns than the primary winding, thus, the transformer 18' is a step-up type which amplifies the current (in terms of voltage value);</p> <p>Fig. 3 shows a wave shaping circuit 33' and the associated controller 30 for detecting rotation of the motor armature based on monitoring a voltage relating the amplified current.</p>
<p>2. The method of claim 1, further including feeding the voltage to conditioning circuitry.</p>	<p>the wave shaping circuit 33' is a conditioning circuit.</p>
<p>4. The method of claim 2, further including stopping operation of the motor when a blocked rotor condition is detected by the conditioning circuitry based on the monitored voltage.</p>	<p>column 4, line 66 through column 5, line 17 describes the stopping of the motor based on the period of the current undulation when the motor rotor is blocked.</p>
<p>Claims 7, 11, 15.</p>	<p>Same as that of claim 1, further explanation is deemed un-necessary. It is noted that claim 15 is broader than claim 1, therefore, claim 15 is also met by Fassel's teaching.</p>
<p>Claims 10, 14, 17.</p>	<p>Same as that of claim 4, explanation is omitted.</p>

**Examiner's further explanation:**

With respect to claim 1, Fassel does not identify the transformer 18' as an RFI choke.

However, all inductors, all chokes, and all transformers are functioned as an RFI choke because:

(1) All coils (or windings) in an inductor, or in a choke, or in a transformer, when subject to ac current, will generate a counter electromotive force (counter emf). The counter emf is a voltage which opposes any change of current in the coil. Thus, the counter emf smooths out the ac current.

(2) Radio frequency is an ac current.

In view of the foregoing reasons, the transformer 18' is an RFI choke.

3. Claims 3, 8, 12 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fassel et al as applied to claims 1, 7, 11 and 15 above, and further in view of Amato US Patent No. 3,560,818 or further in view of the "Radio Armature's Handbook", 1974, Fig. 5-12 (B) or (C).

Regarding these claims, Fassel et al do not show a capacitor connected in parallel across the power leads. However, a capacitor connected in parallel across the power leads is taught by Amato.

Amato Fig. 3 shows a capacitor 154 connected to a dc power source. Amato column 3, lines 64-66 states that "If **desired**, filtering capacitors 154 and 156 can be connected in parallel with batteries 80 and 82 respectively". (Emphasis added). Thus, adding a capacitor to the power leads is considered an optional arrangement.

Then why adding such a capacitor ???

Adding such a capacitor will filter out the voltage fluctuation of the dc power source and make the dc voltage source more stable. A stable dc voltage source will run the motor more smoothly.

Because adding a filtering capacitor to the dc power leads can stabilize the dc power source and run the motor more smoothly, it would have been obvious to a skilled person in the art to add a filtering capacitor across the dc power leads of Fassel's to achieve the same subject matter as claimed.

The "Radio Armature's Handbook", 1974, Fig. 5-12 (B) or (C) teach a similar choke/capacitor arrangement for smoothing out the fluctuation of dc power source, further explanation is un-necessary.

4. Claims 5, 6, 9, 13, 18, 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

6. Any inquiry concerning this communication should be directed to Bentsu Ro at telephone number 571 272-2072.

4/8/2005

  
Bentsu Ro  
Senior Examiner  
Art Unit 2837